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61. An isolated polypeptide comprising a member selected from the group consisting

(a) an amino acid sequence matching SEQ ID NO:2 or SEQ ID NO:4;

(b) an immunogenic polypeptide comprising a fragment sequence of at least 15 amino acids that matches an aligned contiguous segment of SEQ ID NO:2 or SEQ ID NO:4;

wherein the isolated polypeptide, when administered to a subject in a suitable composition which can include an adjuvant, or a suitable carrier coupled to the polypeptide, induces an antibody or T-cell immune response to a polypeptide having the sequence of SEQ ID NO:2 or SEQ ID NO:4;

- 62. The isolated polypeptide of claim 61, wherein the polypeptide is according to (a).
- 63. The isolated polypeptide of claim 61, wherein the polypeptide is according to (b).
- 64. The isolated polypeptide of claim 61, wherein the immunogenic fragment of (b) comprises at least 20 amino acids.
- 65. The isolated polypeptide of claim 61, wherein the isolated polypeptide consists of SEQ ID NO:2 or SEQ ID NO:4.
 - 66. A fusion protein comprising the isolated polypeptide of Claim 61.
- 67. An immogenic composition comprising the polypeptide of Claim 61 and a pharmaceutically acceptable carrier.
 - 68. The immunogenic composition of Claim 67, wherein the vaccine comprises at least one other *Moraxella catarrhalis* antigen.



of